

WHAT IS CLAIMED IS:

1. A radio frequency (RF) receiver for receiving an RF signal of a prescribed reception band and converting the received RF signal to an intermediate frequency (IF) signal of a selected reception channel in a mobile telephone, the RF receiver comprising:

5 first and second band division filters for band-pass filtering an RF signal of a first reception band and an RF signal of a second reception band, respectively;

a first RF switch for selectively applying the received RF signal to one of the first and second band division filters;

10 a second RF switch for selecting one of two output signals from the first and second band division filters;

a mixer for converting the signal selected by the second RF switch to an IF signal; and

15 a controlling unit for controlling the first and second RF switches such that the first and second RF switches are connected to one of the first and second band division filters, a frequency band of which corresponds to a frequency band to which the selected reception channel belongs.

2. The RF receiver as claimed in claim 1, wherein the first and second reception bands are lower and upper frequency bands, respectively, which are determined by equally dividing the prescribed reception band.